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AUTHOR Blackburn, Robert; And Others
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ABSTRACT

Higher education research on faculty and psychological and sociological literature on professionals at work in organizations are reviewed in order to determine, as part of a 5-year project, why faculty behave as they do. The survey is seen as a conceptual guide for understanding the multidimensional factors involved. The results of the analysis of the literature survey are presented in five major sections covering: (1) works by well-known commentators on faculty; (2) faculty goals, the tripartite division of faculty work functions, and faculty allocation of effort; (3) the teaching role, particularly empirical evidence of the relative effectiveness of college classroom methods and styles, assessment of teaching quality, relationships between instructional performance and student learning, and rewards of teaching; (4) faculty research review; (5) theoretical constructions from psychological and sociological research that suggest alternative approaches to understanding how faculty experience their work; and (6) selected results that suggest trends and needs for future research and theory. Ten pages of references are included. (LB)

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Faculty as a Key Resource

A REVIEW OF THE RESEARCH LITERATURE

by
Robert T. Blackburn,
Janet H. Lawrence,
Steven Ross,
Virginia Polk Okoloko,
Jeffery P. Bieber,
Rosalie Melland
and Terry Street

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A Review of the Research Literature

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Robert Blackburn
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Rosalie Metland
Terry Street

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Joan S. Stark, Director
Wilbert J. McKeachie, Associate Director

Suite 2400 School of Education Building
The University of Michigan
Ann Arbor, Michigan 48109-1259

(313) 936-2748

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Contents

Preface ix

Introduction 1

I. The General Literature: A Historical Perspective 3

Foundations of Research on Faculty 3
Lazarsfeld and Thielens's 1958 Study 3
Parsons and Platt's 1968 Study 4
Jencks and Riesman's 1968 Study 4
Bowen and Schuster's 1986 Study 5
Major Subdivisions Within Higher Education 6

II. Faculty at Work 9

Faculty Goals 9
Faculty Roles 10
Distribution of Effort 10

III. Faculty in the Teaching Role 13

Methods of Instruction 13
Evaluation of Teaching 15
Teaching Performance and Student Learning 17
Rewards for Teaching 19

IV. Research on Faculty: A Summary of the Literature 21

V. Professionals at Work in Organizations 23

Role Performance Enhancers and Detractors:
Properties of the Environment 23
Role Integration 23
Opportunity Structure 23
Social Support and Cooperation 24
Organizational Structure 24
Role Performance Enhancers and Detractors:
Properties of the Individual 25
Stress 25
Commitment 29
Work Motivation 31
Power and Authority 32
Conceptualization of Faculty Members' Roles 32

VI. Concluding Observations 35

References 37

Tables

1. Principal Method of Instruction 14

2. Signs and Symptoms of Job Stress and Worker Burnout in Human Service Programs (Cherniss, 1980) 26

3. Personal Indicators of Staff Burnout (Carroll & White, 1980) 27

Figures

1. A social competence model of burnout (Harrison, 1983) 28

Preface

When launching this literature review on faculty as a key resource, all seemed in good order--clear, reasonably simple, and straightforward. There is now an abundant literature on faculty. The challenge became selecting the proper key words for the systematic searches of the standard repositories.

What we found from our initial search was how faculty spend their time, the amount they give to teaching, how much they produce in the way of articles, what they have as goals for undergraduates, how they are rated by students, and the like.

What we did not find, except for an occasional or related piece here and there, were studies from the faculty member's perspective. If one asks questions about *why* faculty do what they do with respect to their teaching, the literature is indeed sparse. In fact, there was so little that we changed our strategy. We started to interview faculty about their work and their career, focusing on the pedagogical role.

After we listened to more than twenty hour-long interviews with faculty (black/white, female/male) in liberal arts colleges, community colleges, and regional universities who taught in different disciplines and who were at different stages in their careers, the higher education literature became even less informative. It does not tell how professors deal with: a bad class, the stress they feel, a non-supportive organization, poorly prepared students, frustration, alienation--the concerns we were hearing about in our interviews. There is not an adequate higher education literature on faculty from their own internal perspective.

As a result, we turned to the larger psychological and sociological literature that deals with professionals at work in organizations. This review by no means exhausts that vast body of theory and knowledge. It does include several conceptual frameworks that employ variables most in accord with what faculty were telling us about their careers and their teaching. We believe this part is essential for our five-year research goal, the first step of which is to understand why faculty behave as they do. While we are confident that attention to this literature will prove profitable, we also know that this section of our review of the literature will be appreciably different a year from now.

Introduction

The overall goal of NCRIPTAL's research program on faculty as a key resource is to ascertain how institutional structures and common understandings (culture) influence faculty role performance and, ultimately, student achievement. It should be stated at the outset that the underlying assumption is that these environmental variables combine with personal attributes of professors and result in different levels of effort.

From consideration of this general theoretical proposition stem the three major purposes of this review of the literature about faculty:

- To provide an overview of extant research literature on the work life of faculty in colleges and universities;
- To highlight generalizations about faculty in the teaching role that have emerged over nearly five decades of inquiry; and
- To identify research studies concerned with the motivation and satisfactions determining faculty orientation to, and performance of, their instructional work role.

Before proceeding with the presentation of our research review, two short explanatory statements about its contents and design are appropriate. First, although this survey is clearly not exhaustive (consistent with the original intent), it should prove useful. The range of published empirical research, literature surveys, and essays selected for inclusion into this review, on the one hand, represents a view about what already is known, and on the other hand, points to the gaps in the literature that remain.

Second, while professors have been the target of extensive investigation--as we demonstrate in subsequent segments--our initial search of the literature indicated, however, research studies to date most often are from the student's perspective and, when the professor is the principal subject of investigation, the data primarily are descriptive and normative (*what* faculty do) rather than introspective (*why* faculty do what they do). Since it is the latter information this research program needs most critically to reach faculty and persuade them to alter their teaching styles to fit their goals and to stimulate their students, the decision was taken to modify the research review process. In particular, the scope of the search was broadened to incorporate relevant findings from research about professionals employed in the nonacademic work environment. As a consequence of the revision, we feel the expanded literature survey provides a conceptual guide for understanding more fully the multidimensional factors associated with how faculty experience their work.

The results of the analysis of the literature survey are presented in five major sections. Section I directs the reader to several works by well-known commentators on faculty. It does not *review* these books but rather describes what kinds of topics they include. Although cited publications largely are inclined towards theory, they serve to chronicle, nonetheless, the development of higher education in general and the academic profession in particular. Section II outlines what we have learned about faculty goals, the tripartite division of faculty work functions, and faculty allocation of effort. The section on faculty in the teaching role (Section III) critically evaluates empirical evidence of the relative effectiveness of college classroom methods and styles, the assessment of teaching quality, the relationships between instructional performance and student learning, and the rewards of teaching. In Section IV, we attempt to summarize the results of our analysis of the faculty research review.

Section V presents a broad array of theoretical constructs from psychological and sociological research that suggest alternative approaches to understanding how faculty experience their work. Finally, in Section VI we conclude with a brief synopsis of selected results that suggest trends and needs for future research and theory.

I. The General Literature: A Historical Perspective

Increasingly evident throughout the literature written by and about faculty members is the growing acknowledgement that the academic profession is not a monolithic entity but rather comprises many distinct, sometimes overlapping, subcultures. This portion of the review seeks to outline broadly the critical writings that together serve to illustrate the evolutionary unfolding of now widely established perceptions about the modern academic career. This section provides the historical context undergirding subsequent topics for review. The generalizations reported here are drawn from a collection of books that for the most part are studies containing sets of defining categories (background characteristics such as socioeconomic factors, gender, religion raised, educational and professional training, and work role functions) within which more descriptive information can be written.

The literature framing the important normative dimensions of the academic career experience is capsulized from two perspectives: description of foundational research and delineation of some of the major subdivisions characterizing higher educational work life. Each is reported in turn.

Foundations of Research on Faculty

Academics writing about academics goes back to the beginning of higher education. Most early works, however, were about an individual or a single institution and were principally essays without supporting data. The first more comprehensive or data-based reports on U.S. academics were by Shyrock in 1939 (1959) and Wilson (1941). While limited in the evidence they present, they do have statistical portraits of faculty and the stratification of colleges and universities into different types with different status. Their works also serve as a benchmark for the launching of a new era in U.S. higher education. Four studies from this collection of literature are considered: Lazarsfeld and Thielens (1958), Parsons and Platt (1968), Jencks and Reisman (1968), and Bowen and Schuster (1986).

Lazarsfeld and Thielens' 1958 Study

The first classic survey study of faculty members, by Lazarsfeld and Thielens (1958), is the product of personal interviews with 2,451 social science professors from a cross section of four-year colleges and universities in the United States in the spring of 1955. This work is an early documentation of the diversity of American higher education, even before the major development of the two-year college. It influenced the design of inquiry into higher education because it took an important step beyond narrowly descriptive works. It attempted to place both faculty members and institutions in the political and social contexts of the time and to generate inquiry about higher education within the development of theory about social institutions. Because of the sampling design, however, it is difficult to compare the findings with later and more inclusive surveys of faculty members. The sampling design overselected from large public universities (of the 182 institutions, 165 became the sites of interviews). Finally, perhaps, it was a regrettable decision to confine their respondents to social science faculty just because the authors assumed that these disciplines would be most vulnerable and responsive to the prevailing 1950s' "red-baiting" political climate.

Among their results, Lazarsfeld and Thielens show that colleges and universities with national reputations for having scholarly faculty and able students (institutions they denote as "superior") were more likely to defend their faculty in the face of this pressure. They also describe a continuum of faculty members' attitudes from permissive to conservative and found permissive faculty members more likely to be found at superior colleges. They conclude that what they call the "effective scope" of social scientists, particularly those of the more permissive disposition, was seriously threatened during this period, and that American higher education was compromised in its mission by a tendency to withdraw from participation in political and social service at a time when higher education's capacity to function in this role was greatly expanding.

Parsons and Platt's 1968 Study

Parsons and Platt's (1968) pilot study of American academics at eight institutions of varying size and "quality" was a sample survey supplemented by personal interviews of 420 full-time faculty members. Parsons and Platt believed that increased student enrollment signaled higher education's growing important role in American society. They also attempted to document the growth of investment in research and to demonstrate the associational, as opposed to bureaucratic, structure of internal governance in academic institutions. They argue theoretically and empirically for the relative egalitarianism of academics, which they believe has its source in the expertise that necessarily evolves from increasing specialization. They also argue for the special importance of what they call cognitive rationality, for the growth of a system of influence and status within American higher education, and for the growing prestige of research at the elite institutions.

Their pilot study was intended to demonstrate that, although the administrative structure of institutions was growing constantly, the faculty were still organized on a collegial basis. Because they intended to examine academic life at the institutional, departmental, and individual level, the study was designed to include a large number of respondents from a small number of diverse institutions.

Analysis of their data revealed that size and quality did not explain the variance in their data; therefore, a scale of internal differentiation was developed that dichotomized institutions by research orientation and quality and further subdivided them by size. "Quality" (or "eliteness") was judged in much the same way that Lazarsfeld and Thielens (1958) did, namely, institutions having faculty with national scholarly reputations and students of high academic ability. These institutions usually are affluent, with higher tuitions and higher faculty salaries. In these select institutions faculty have a strong role in governance and faculty roles are differentiated so as to include consulting and work with professional associations as well as teaching and research rather than being confined almost exclusively to the pedagogical role.

Parsons and Platt also developed five functional categories of activity (teaching undergraduates, teaching graduates, research, administration, and consultation) and collected data about the preferred and actual allocation of time given to these activities. Their pilot study found that the great majority of respondents preferred a balance and fusion of these roles. They also found a marked difference in the distribution of actual and ideal role activities according to the level of institutional differentiation. The greatest role strain appeared at the medium-sized institutions that followed the research ideal of the larger institutions but imposed a teaching burden comparable to that of the smaller institutions. The later chapters of the report give extensive data on levels of career satisfaction and on power and influence patterns within departments and institutions. These data show faculty at the most highly differentiated institutions as both more satisfied and more in control. Although Parsons and Platt's study was not intended to be a study of the American academic profession, it is an important collection of data about American academic institutions and the contrasts between them along the dimensions of size, quality, and research orientation.

Jencks and Riesman's 1968 Study

Jencks and Riesman's *Academic Revolution* (1968) is a less focused and less systematic account of a diverse array of institutions. They conducted interviews at a large number of institutions representing professional schools, women's colleges, black colleges, Catholic and Protestant colleges, and a small number of anti-establishment institutions and community colleges. The authors synthesized their observations by an interest in the potential impact of the reformist or revolutionary values of the young on the structure of higher education.

Jencks and Riesman predicted that old special-interest colleges were bound to be replaced by the national university model and that the social elitism embodied in the older ideal of American higher education would, similarly, be replaced by the growth of meritocracy found in the national university system. Writing in 1968, Jencks and Riesman saw evidence that the pace of social change would continue to accelerate and that the gap between generations

would grow wider and conflict would intensify. At the same time, they predicted that the accession to power by the young would be more marginal than central and that it would be confined to the social aspects of undergraduate life.

Jencks and Riesman argue that colleges resemble one another more than their constituencies resemble one another, and therefore college faculties have common values and experiences that tend to homogenize higher education even in the face of the considerable diversity of institutional types they described in this work. They included a more diverse array of institutions than had either Lazarsfeld and Thielens (1958) or Parsons and Platt (1968). Their argument is firmly planted in the political and social developments of the 1960s and is more suggestive than systematic in its presentation of the evidence they assembled for their discussion.

Bowen and Schuster's 1986 Study

Bowen and Schuster's 1986 study is described as picking up where Jencks and Riesman (1968) left off. However, it is a more sharply focused and defined inquiry into the morale of American professors under the impact of the declining resources available for higher education, the changing demographics of the profession, and the shifts in enrollment patterns.

Bowen and Schuster report the results of a two-year study during which 38 campuses were visited and 532 individuals interviewed. The campuses were selected to include an array of institutions diversified along nine dimensions, including type of control, geography, special mission status, selectivity, and enrollment trends. Interviews were conducted with 180 administrators, 127 department chairs, and 225 faculty.

The faculty were selected by the developmental stage of their academic career and included junior faculty on the brink of a tenure decision, faculty "nomads" who had not found a permanent niche, mid-career faculty, and senior faculty who were either highly productive or slated for early retirement. These faculty members were variously dispirited, fragmented, devalued, and dedicated. Bowen and Schuster found that faculty morale varied considerably among campuses and that, although there was some volatility in reports of changes in morale, there had been little dramatic change over the past eighteen years.

Bowen and Schuster discuss seven factors that they argue influence faculty morale, including compensation and working conditions, leadership, public support for higher education, the accelerating pace of the relentless pressures of academic life, and the perception of lack of mobility. They report a tendency to be apprehensive and discontented, an overall mood of gloom, and the general sense that faculty were "frustrated and dispirited." Bowen and Schuster also express surprise and dismay at the extent to which faculty are fragmented. They argue that faculty members have become more specialized, more cosmopolitan, and more diverse in their backgrounds even as the institutions at which they teach are increasingly diverse. They found tension over the reward system and the immense pressure to obtain tenure. An extended discussion of faculty compensation is coupled with a brief report of faculty responses to questions about compensation, but they note that faculty appear to be coping with the adversity of inadequate compensation surprisingly well.

Bowen and Schuster indicate that no single finding from their interviews stands out more sharply than the fact that faculty are unwilling to abandon their academic careers and that a vast majority--over 90%--report they would choose the same career again. These authors sum up their observations of the professorial life by concluding that the quality of faculty life, measured by the interview data and by observations from their site visits, varied from fair to excellent at two-thirds of the campuses they visited, and from fair to poor or very poor at the other third. Moreover, Bowen and Schuster argue that the trend in the quality of faculty life is worsening at a significant rate; parenthetically speaking, however, it is difficult to estimate the validity of this argument since they do not specify the variables considered in making this estimation.

From evidence provided by the National Research Council and the National Center for Education Statistics, Bowen and Schuster then turn to an extended discussion of changes in the labor supply and the academic labor market. They express concern that higher education is hampered in competing for the most highly talented individuals by financial stringency. It is posited from national census and education data that it should be possible to maintain a steady flow of "new blood" into the academic profession.

From their own 1984 survey of chairpeople of leading graduate programs, Bowen and Schuster comment on the profession as excellent in spite of the prevalence of pessimism about academic careers. While their work is somewhat marred by questionable sampling strategies and frequent plunges into rhetorical overstatement, it is a valuable compilation of their own and other data. It also makes a forceful statement on a number of important issues in higher education.

In closing, this synoptic overview of 45 years of American higher education spans the life course of the academic from the new entrant to the recent emeritus faculty member. Not only has the system expanded enormously in size and increased in its heterogeneity, it has responded to the larger social issues at different moments in time.

Major Subdivisions Within Higher Education

The academic profession is not a singular body but rather is made up of many subcultures. Furthermore, behavior across subgroups varies appreciably.

The significant issues of the times have led researchers to classify faculty in different ways. In the 1960s, for example, professors were differentiated by political orientation while in the 1970s they were differentiated by their perceptions of retirement. However, interest in the impact of institutional, disciplinary, and age group membership on role performance has persisted.

The categorization of institutions has advanced from the use of reputation as the primary criterion (Keniston, 1958; Cartter, 1966; Roose & Anderson, 1970) to the more empirical methods of today (Conference Board, 1982; Conrad & Blackburn, 1985). The classification system developed by the Carnegie Council (1976) is used widely and will be followed in this review. The Carnegie categories are: doctorate-granting institutions, comprehensive universities and colleges, liberal arts colleges, two-year colleges and institutes, professional schools and specialized institutions, and institutions for nontraditional study. The distinctions between the rankings within the Carnegie categories are based on size, level of research funding, degree programs, qualifications of entering students, and institutional mission.

After reviewing the extensive literature on role behaviors of faculty members in different types of institutions, Finkelstein (1984a) concluded that variations can be represented as differences between research universities and elite liberal arts colleges on the one hand and all other institutions on the other. Professors in these two general categories differ systematically in (1) their preferences for research, teaching, and service; (2) the effort they give to these facets of the faculty role; and (3) the nature of their identification with the institutions (Jencks & Riesman, 1968; Finkelstein, 1984a; Bowen & Schuster, 1986).

Seeking to explain institutional differences, one group of researchers focused on the *intellectual attributes of faculty and students*. The general argument is that the abilities and interests of these key groups result in greater research activity in the research universities and elite liberal arts colleges. Such schools can attract highly qualified faculty members who have internalized a research ethic and are active scholars. The graduate and undergraduate students are academically talented, and this combination of teachers and learners enhances the professors' involvement (Blau, 1974). While these highly scholarly trained faculty at the most selective liberal arts colleges do not publish to the same degree as their counterparts at research universities (and at some doctorate-granting universities), their life styles and status are similar.

Other investigators focused more narrowly on the *social structures of institutions and the belief systems within them.* Within this general class of studies one finds an emphasis on role and reward theories (Light, 1974). The findings show that the faculty role structure is not consistent across institutions and different emphasis is given to the core components of teaching, research, and service (Fulton & Trow, 1974; Ladd, 1979). Variations across campuses in the support for instruction and research (e.g., laboratories, libraries, funds, and personnel) contribute to further institutional differences in role performance (Parsons & Platt, 1968).

Studies of the shared culture and its impact on faculty behavior lead to several generalizations about the sources of institutional differences. First, the findings indicate that the opportunity to interact with qualified individuals who share a general interest in research and perhaps in a specific issue enhances research involvement (Pelz & Andrews, 1976; Blau, 1974). By logical extension one could infer the same applies to teaching, although research of this type does not abound in the literature. Second, faculty socialization experiences as graduate students (Blackburn, 1985) and as faculty members (Clark, 1986) exert a strong influence on behavior.

Several studies have found that professors' beliefs about what they ought to be doing were more predictive of actual role performance than their understanding of the institution's reward criteria (Lawrence & Blackburn, 1985). The consistency of this finding has led writers to conclude that individual faculty members exert autonomy in defining their roles and carrying out their responsibilities. To be sure, researchers have found strong correlations between salary levels and scholarly output (Tuckman, 1976) suggesting merit decisions influence performance. The apparent discrepancy has been examined and an overall conclusion is that people are not being rewarded exclusively for their research as they also tend to be highly involved in service and teaching as well, especially outside of research universities (Holbert & Blackburn, 1985).

Interinstitutional differences, then, derive not only from role structure and resources but from the values faculty bring to their work. In some universities and colleges, the performance expectations and values to which professors have been socialized as graduate students are synonymous. This is not the case in other schools. The implications for faculty motivation to maintain and enhance their teaching is a primary concern of NCRIPTAL's research program.

In addition to the faculty differences found across institution types, there are other differences in behavior and beliefs among faculty disciplinary groups within and across institutions. The literature reveals variations in both rate and nature of scholarly output as well as in teaching values and behaviors (Blackburn, Behymer, & Hall, 1978). It appears that faculty members in the humanities are more involved in their teaching than their natural and social science counterparts (Zuckerman, 1973). Some of the differences can be explained by the disciplinary structures. To illustrate, scholarship in the humanities is qualitatively different from research in the highly codified biological and physical sciences. Several writers argue that, as a result, the form and rate of publications are not comparable (Blackburn, 1984).

As was the case for research, the structure of the subject matter can influence the way it is taught, a conclusion reached by investigators who have compared discipline groups (Parsons & Platt, 1968). However, involvement with the discipline implies more than working with a particular knowledge base. As Light (1974) points out, disciplinary associations can affect the activities of their members and sometimes, through accreditation, the institutions in which they teach and do their research. Hence, it is wise to take these differences into account along with aggregate institutional variations.

Age stratification is a third major classification scheme used widely in the literature. Most of the research on the relationship between chronological age and role performance has been conducted in single institutions or among several schools within the same institutional category (Morgan, 1970). Some investigators have made comparisons across institutions and within disciplines (Bayer & Dutton, 1977); others have looked at differ-

ences between age groups within a single institutional and disciplinary category over time (Lawrence & Blackburn, 1985; 1986).

Based on the available data, one can conclude that there are often age group differences in faculty values and role behavior. Younger professors have tended to be more interested in research and older ones are more attracted to teaching, although they do not necessarily give more time to this activity (Fulton & Trow, 1974) nor are they necessarily more highly rated as teachers by their students (Hildebrand, 1972). Senior professors tend to identify more strongly with their employing institutions than with their disciplines (Finkelstein, 1984a). Hence, depending on the age distribution of a faculty, this tendency may contribute to the already strong interinstitutional differences in predominant values and interests.

Several explanations for the age-relatedness of certain role orientations have been offered. On the one hand, the differences are assumed to reflect changes in intellectual functioning or intrinsic needs that accompany the maturation process (Baldwin, 1979). On the other hand, some writers argue that the data indicate cohort differences in residual socialization experiences (Bayer & Dutton, 1977; Pfeffer, 1981), and not age-related changes in performance. More recently, investigators have begun looking at interactions over time between factors in the academic environment and in individual differences in abilities and beliefs (Lawrence & Blackburn, 1985; 1986). The net result has been that changes in role performance seem to result most often from cohort membership and the combined influence of social changes that affect all professors. (For a full discussion of the measurement issues, see Blackburn & Lawrence, 1986.)

The primary purpose of this overview has been to acquaint the reader with some of the major subdivisions within the professoriate and the differences in performance that have been found to characterize the groups. Other personal variables--gender and race, for example --may differentiate faculty subgroups. However, the preponderance of research on faculty has been on white males so that only occasionally are we able to include these two ascribed characteristics. An increasing number of studies on women highlight their differences from men--for example, women receive lower pay (Barbezat, 1985), they have lower status in terms of rank and rating of the employing institution (Blackburn & Hobelaid, 1986), and they have lower job satisfaction (Hobelaid, 1986).

Unionization, an organizational variable, differentiates faculty across institutions in terms of the kind of governance structure that comes into being and the degree of faculty participation in it. Faculty and administrator relationships are altered after unionization occurs (Ladd & Lipset, 1975).

Last, it is essential to underscore the fact that a major limitation of the studies to date is the preponderance of research in one category of institutions--the doctoral-granting universities. This limitation also applies to much of the literature review that follows.

II. Faculty At Work

Especially in recent times, as universities and colleges have been compelled to restrain operating costs and read more conscientiously the demographic and economic conditions affecting society at large, the study of faculty at work has received increased attention. Related literature largely is quantitative in nature; that is, it describes what faculty do, not why they do it. This section includes discussions of a selection of the best research publications and focuses particularly on faculty goals and activities with respect to their undergraduate teaching and on the varied roles faculty assume in responding to their work expectations.

Faculty Goals

While there are studies going back to the 1950s, a more or less regular flow begins after the explosive expansion in the number of students and faculty during the 1960s. Borland (1970) found that the institutional goals at Indiana University did not influence the personal goals of its faculty members; rather, the personal and professional goals of individuals became the goals of their institution. Given freedom to allocate time and effort, faculty members are able to satisfy their own goals. Borland's findings suggest that faculty goals are relatively impervious to the rewards presumably associated with compliance to institutional goals.

Bayer (1973) asked about the essential or very important goals faculty members have for their undergraduate teaching. He found agreement across institutional types for goals relating to the intellectual development of undergraduates. At the same time, he found disagreement over goals for the personal and moral aspects of human development. Student outcome goals for which there was close agreement included mastery of knowledge in a discipline, ability and desire to undertake self-directed learning, ability to think clearly, preparation of students for employment, provision of the tools for critically evaluating contemporary society, and development of religious beliefs or convictions. Bayer found less agreement on conveying a basic appreciation of the liberal arts, developing moral character, providing emotional development, and developing responsible citizens and family members. In addition, Platt, Parsons, and Kirschstein (1976) showed that student intellectual growth is a goal faculty have held over a span of time.

Blank (1976) found intra-institutional diversity between goals individuals had for their teaching and those an institution had for the students, a diversity that increased with institutional size and complexity.

Gaff and Wilson (1975), Morstain and Smart (1976), and Stark and Morstain (1978) found significant differences in patterns of faculty values among disciplinary groups in institutions ranging from an eastern public university to a small midwestern liberal arts college. Natural scientists were most likely to support the goal of preparation for a career whereas social scientists tended to support general education. Ralph (1973) concluded that faculty members' goals vary with the stage of intellectual development of the individual faculty person, with more development leading to greater complexity of goals.

Finkelstein (1984a) concludes that faculty members are most influenced by internal standards of professional performance but that the translation of these internal standards is mediated by workload assignment. To the extent the faculty members are able to control their work assignment, their performance reflects internal standards. Furthermore, Finkelstein believes that research goals are strongest for the most productive academics, suggesting that the goals of faculty to some extent are mediated by the quality of their achievements.

Gaff and Wilson (1975) discuss the relationship of faculty members' goals and institutional type to teaching practices. They show that on eight of fourteen dimensions of teaching practice, institutional type contributes more to variations than do individual goals. They conclude that teaching practices are more sensitive to institutional context than to individual goals. Gaff and Wilson's approach reflects a major dichotomy of faculty goals, namely, student growth and development versus subject-matter-oriented outcomes.

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Faculty Roles

Research on college faculty most frequently draws distinctions between the three kinds of activities they engage in, namely, teaching, research, and service. After sorting professors on the basis of role, the studies then focus on one or another of the three activities. A set of activities (e.g., preparing for class, grading papers, constructing an examination, teaching in the classroom, etc.) are then said to describe the teaching (or scholarly or service) role.

This tripartite division of faculty work has been criticized as artificial and dysfunctional because the role activities intersect and overlap (Bess, 1982); for example, working with students on their dissertations can be both research and teaching. However, factor analyzing a wide assortment of detailed faculty activities produced these same three traditional roles (Bess, 1982). That is, the three roles are seen by faculty in most institutions as mutually exclusive. Hence, we use them in this review.

Faculty members assume all three roles in every institutional type, but to differing degrees. When asked about their role preference, all rank service last. Faculty members at research universities tend to value research more than teaching whereas members in all other kinds of institutions give a greater weight to teaching (National Surveys, 1968; 1972; 1975; 1977; 1984). When faculty members are asked how they would like to alter the present distribution of their work among the three roles, in all institutions they say they would prefer to increase the time given to research and decrease the time spent on service. Their time teaching would remain essentially the same.

Some studies suggest that women value the teaching role more than men do, but this research is open to question as other explanations for the differences are possible (Finklestein, 1984b; Menges & Exum, 1983). For example, women tend to be more heavily concentrated in institutions with a greater emphasis on teaching. However, they may be where they are *not* because they wanted to teach more but because they have been discriminated against in acquiring positions they sought in research universities.

Teaching styles (as contrasted to teaching methods) tend to differ across disciplines and have distinctive characteristics. Research methods also vary, although at a higher level of abstraction one finds common methodological approaches to solving problems (e.g., many disciplines use an experimental method). Service activities, such as committee or administrative work, involvement in professional associations, reviewing papers, accrediting, and the like, are much the same across the disciplines.

Faculty members' interests change over the course of their careers. Their interest in the teaching role increases, as does interest in participating in governance (service). Older faculty members express a decreased interest in the research role (Fulton & Trow, 1974; Baldwin & Blackburn, 1981; Lawrence & Blackburn, 1986). These changes are better documented for selective liberal arts college and research university professors than they are for community college and regional university faculty. Even the meaning faculty give to the three terms may not be the same across institutional types. In non-selective liberal arts colleges, for example, research may mean library reading for courses, not data collection. The NCRIPTAL research project is directed at clarifying role definitions across college and university settings.

Distribution of Effort

Faculty workload studies have a long history and increase in numbers. Bowen and Schuster (1986) cite numerous studies showing that faculty members generally put in more working hours a week than the average for all workers in non-agricultural employment. Faculty members work an average of 49 hours per week in four-year colleges and 41 hours a week in community colleges. Studies at research universities show faculty at their job 55

hours a week. Because faculty members are exceptionally autonomous, when compared with other professionals, faculty members' distribution of effort reveals a number of important dimensions of the faculty role. Distribution of time varies by institutional type, with classroom hours greatest at two-year colleges. There are also variations in total working hours across disciplines.

Bowen and Schuster use National Science Foundation (NSF) data that summarize faculty distribution of effort by type of activity (instruction, research, public service, consulting, and professional enrichment). The NSF data show considerable variation in the amount of time spent on instruction by discipline; for example, physical scientists and life scientists devote less time to instruction and more time to research, and faculty in engineering and psychology devote more hours per week to consulting than do faculty in other fields.

Bayer (1973), Baldridge et al. (1978), and Fulton and Trow (1974) view the distribution of effort in different ways. Bayer distinguishes between universities and four-year colleges, and between teaching, research and publication, administration, student contact, and community service. He found that the teaching load at universities is lighter than that at four-year colleges, whereas research time is higher. Although time spent in student contact and administration does not differ significantly at the different institutions, faculty at universities devote significantly more time to community service and paid consulting than do faculty at other types of institutions.

Baldridge et al. distinguish between graduate and undergraduate teaching, time in research, time on administration and committee work, and time in community service. They found that faculty at the research universities devote a higher percentage of time to graduate instruction and research and have significantly higher research productivity than faculty at all other institutional types. The differences across institutional sectors in the amount of time devoted to administration and community service were not significant. Finally, they found that professional autonomy and control of allocated effort were less at less prestigious institutions.

Fulton and Trow (1974) argue that variations in the distribution of effort by institutional type emerge because the academic role is more integrated at research universities, even though research faculty members tend to teach as much as non-researchers. At the same time, research faculty remain involved in administration. At other types of institutions, the academic role is more fragmented, with research and teaching conceived as different kinds of activities carried out by different people.

Finkelstein (1984a) concludes that the research on allocation of effort suggests that the variation by institutional type can be explained by a differential reward system (with "high status" institutions placing greater emphasis on research than "the less prestigious" institutions), by differential workload assignment (with "high status" institutions tending to have fewer teaching hours), and by hiring practices (with institutions tending to select faculty who share their view of the appropriate allocation of effort).

There is, then, an abundant collection of data on what faculty value, the goals they set for themselves as well as for their students, and the different roles they adopt in carrying out the work they do. There is also an appreciable body of evidence showing how faculty in different disciplines and in different institutional types allocate their effort in each of the roles.

III. Faculty in the Teaching Role

Interest in issues related to faculty in the instructional role has assumed many forms. At the individual level, these include evaluation of instruction and reporting of individual teaching behaviors. At the broader professional level are published handbooks describing various "innovative" methods and theories of instruction.

This literature review focuses on recent empirical contributions in four areas. First, research identifying the principal modes of instruction current in higher education is discussed. Second, salient research from the extensive literature on evaluation of teaching competence is considered. Third, empirical information about the relationships between teaching performance and student learning is summarized and discussed. Finally, the meager available empirical investigations suggesting important personal consequences of teaching for college faculty are examined. Although the selection of research reviewed is not intended to be comprehensive, it offers some insight for future research on teaching in postsecondary education. Further review of this body of literature is provided by other programs in the NCRIPTAL research group (McKeachie, Pintrich, Lin, & Smith, 1986).

Methods of Instruction

Research on teaching in higher education points to the application of a number of categories of teaching methods; these include lectures, discussions, team teaching, and "technological" instruction. (See McCord, 1985, for a detailed description of these methods.) This section briefly reviews seminal research on teaching methods at the college and university level. The review is limited to surveys describing recent empirical contributions on the topic.

Several current reviews of empirical research on teaching methods have been published (Barnes & Ellner, 1983; Cole, 1982; Duncan & Barnes, 1986; Kulik & Kulik, 1979; Levenson-Rose & Menges, 1981; Lowman, 1984; McKeachie, 1986), frequently comparing the relative effectiveness of different ways of imparting information and encouraging learning. By and large, reviewers of the research acknowledge that, in general, the results are far from conclusive.

Much of the research compares the teaching method of lecture with the teaching method of discussion. Kulik and Kulik (1979) attempted to characterize basic conclusions of several reviewers. First, research findings indicate no significant differences between lecture and discussion when the measure of effectiveness is learning factual matter. On the other hand, there is literature to suggest, as Kulik and Kulik (1979) noted, that teaching by discussion is more effective than teaching by lecture for developing problem-solving ability (Costin, 1972; McKeachie, 1970), stimulating thought (Bligh, 1972; Gall & Gall, 1976; Olmstead, 1974), and changing attitudes (Bligh, 1972; McKeachie, 1970).

In a review of research comparing the effectiveness of team teaching and "solitary" teaching in the college classroom setting, Schustereit (1980) similarly concluded that the empirical evidence is generally weak. As Schustereit put it, "While the reviewed studies gave a plurality of support to team teaching, a generalization that team teaching is a superior instructional technique would not be justified" (p. 88).

More recently, findings from research concerning teaching methods that employ technological advancements in higher education--such as audio-tutorials, visual-based teaching, and computer-based instruction--have been synthesized using meta-analysis (Glass, 1976). Five review studies (Cohen, Ebeling, & Kulik, 1981; Kulik, Cohen, & Ebeling, 1980; Kulik, Jaksa, & Kulik, 1978; Kulik, Kulik, & Cohen, 1979, 1980) sought to answer questions mainly about the relative importance of certain technological-instructional methods and so-called conventional teaching methods with respect to: (1) student achievement; (2) student satisfaction; (3) withdrawal rates; (4) relationships between success and aptitude for the student; and (5) student use of time while enrolled in course subject.

Despite the intervention of the more statistically developed meta-analysis of methodology, findings from "technologically" oriented teaching modes are somewhat disappointing. For

example, the data showed small statistical superiority in the short-term success of students taught by the "innovative" technological-instructional methods over students taught by conventional methods. Yet a slight advantage of face-to-face feedback was apparent. Still again, differences in student withdrawal rates were found to be negligible.

In sum, then, the related research literature shows that research on instructional styles and techniques conducted to date by no means establishes the absolute superiority of a single teaching method. Indeed, when viewed together, perhaps the single most significant finding to emerge from research evidence is strong confirmation for the conclusion succinctly presented by McKeachie over two decades ago. "When one is asked whether [one method] is better than [the other], the appropriate counter would seem to be, For what goals?" (1963, p. 1127).

We do have, however, some information on how faculty teach, even if the reasons why they perform as they do are not known. In a study of 1,971 faculty in 24 colleges and universities (community colleges, less and more selective liberal arts colleges, and regional and research universities), Blackburn, Boberg, O'Connell, and Pellino (1980) had faculty members report on the principal teaching method they used when conducting their first undergraduate course of the week. They also described the course (title, number of students, and typical student level--first year, second year, etc.). This methodology assured a variety of class types, sizes, and subjects. The results are displayed in Table 1.

TABLE 1

Principal Method of Instruction (in Percentages)

INSTITUTIONAL TYPE*	LECTURE	DISCUSSION	RECITATION	LAB/ SHOP	APPLIED (ART)	INDIVIDUALIZED
CC	76	7	1	7	4	1
LAC-A	80	9	2	3	2	3
LAC-B	73	12	1	5	4	1
U-A	78	4	0	6	6	1
U-B	83	8	1	3	3	1

* CC = Community College
LAC-A = Liberal Arts College (less student selectivity)
LAC-B = Liberal Arts College (more student selectivity)
U-A = Regional University
U-B = Research University

It is immediately obvious that faculty members prefer to lecture, irrespective of institutional type, subject, class size, or course level. Particularly disappointing is the small fraction of faculty who are involved in a significant way with individualized forms of instruction (tutorials, self-paced plans, programmed instruction). In all cases, there were no differences between genders.

What emerges, then, are questions as to what lines of inquiry would be most helpful for providing crucial knowledge. One possible province for future research would include more clearly defined individual-difference variables in empirical investigations. Levenson-Rose and Menges (1981) also spoke to the need for potential research to account for the effects of individual traits for *both* instructors and students. To what extent do students' (and teachers') demographics alter the effects of specific modes of instruction on student mastery? What are the important dynamics of faculty decision making about teaching practices?

In a similar vein, it is suggested that more cautious attention be paid to the definition of variables, especially since better operationalization of variables increases comparability

across studies. A broad yet no less important issue to examine involves the relationships between institutional contexts (discipline, classroom size, and composition) and effectiveness of teaching techniques.

A final suggested category of research calls for enlarging the *scope* of research examination. As McCord (1985) mentioned in his review of theories of instruction, empirical tests of teaching methods seldom consider facets of the psychological, developmental, and cognitive processes of college instructors in relation to classroom experiences. Are specific emotions stimulated by certain teaching activities and classroom challenges? What are the functional dimensions of the teacher-student interaction from the perspective of the instructor and how do they condition faculty teaching practices?

Clearly, many questions await research on the dynamics of college instruction methods. The results of prior research reveal much work that remains to be explored. NCRIPTAL research is directly addressing some of these questions.

Evaluation of Teaching

The number of studies investigating the evaluation of college instruction is large. Literally hundreds of scholarly publications of varying depth and research value deal with one or more of the issues pertaining to teacher evaluation. The research reported here is confined to recent examples.

Various methods for gathering evaluative information about teaching quality have been reviewed (e.g., Benton, 1982; Brandenburg, Braskamp, & Ory, 1980; Cohen, 1981; Centra, 1980). An overwhelming majority of the research examines the reliability, validity, and credibility of student ratings of instruction, along with their impact. Several comprehensive reviews have been provided (e.g., Abrami, Perry, & Leventhal, 1982; Centra, 1980; Cohen, 1981; Dowell & Neal, 1982; Duncan & Barnes, 1986; Feldman, 1976, 1977; McKeachie, 1979; Rotem & Glasman, 1979). Moreover, the reviews have included many additional studies.

It would appear, then, that student ratings of teaching are abundant beyond need. However, certain problems surface when the studies are examined. First, with few exceptions, the studies are atheoretical, strictly empirical, and frequently based on convenience samples (i.e., the subjects are entering students in Psychology 101 and the instructor is the principal investigator). Second, there are only a few student rating scales that are used in more than one location (the Educational Testing Service instrument is an exception); most are locally constructed. The vast variation in the measuring instruments is not the most serious problem with this line of investigation, however, since the scales correlate highly with one another (Doyle, 1983). The instruments also have high retest reliabilities and good validity (Costin, Greenough, & Menges, 1971; Dowell & Neal, 1982; McKeachie, Lin, & Mann, 1971; Marsh, Fleiner, & Thomas, 1975). These studies suggest that students seriously engage in this exercise.

The three principal domains of limitations to this line of inquiry are: (1) determining the variables that affect student ratings; (2) ascertaining the components of effective teaching; and (3) calculating the strength of the relationship between ratings and student learning.

In the first domain, class size, grade expected, grade received, required vs. elective course, gender of the student and gender of instructor, and other factors tend to have small correlations with student ratings of overall instructor performance. Doyle (1983, p. 65) estimates that:

> Student biographical variables will correlate less with summary ratings than will student ability and cognitive-style variables, and ability and cognitive-style variables will correlate less with summary ratings than will student motivational variables. Given measurement error, relationships among principal indices of overall teaching effectiveness will account for 30-60 percent of variance. Relationships of overall measures with instructor characteristics like motivational effectiveness and providing clarifying structure, and student characteristics like motivation, will

account for less variance, on the order of 10-15 percent in a multivariate analysis. Other relationships will account for still less variance.

In addition, Abrami and Mizener (1983), Isaacson, McKeachie, and Milholland (1963), and Sherman and Blackburn (1978) have found strong relationships between faculty personality variables (such as perceived warmth of the instructor) and the ratings they receive from students.

As for the second domain, the components of effective teaching, numerous factor analysis studies consistently uncover the same factors--teaching skill (clear, organized, etc.), rapport (interest in students), knowledge of the subject, fairness, and occasionally one or two other factors (see Bejar & Doyle, 1981; Isaacson et al., 1963; Marsh & Hocevar, 1984). The settings in which the studies are conducted are overwhelmingly of the same type: an instructor in front of a group of students trying to transmit knowledge and understanding from herself or himself to them. Yet the unique characteristics of different settings have not been delineated. A seminar calls for a different mode of instruction than does a lecture, formal or otherwise. Likewise, a laboratory, a field experience, and professional training require different styles of teaching.

Furthermore, we know very little about how teaching relates to type of faculty appointment, stage of faculty career, and faculty age. Most of the studies are conducted on faculty with full-time appointments (with the exception of some studies on university teaching assistants). Colleges today, however, increasingly depend on part-time faculty; many two-year institutions now hire more than half of their staff in this category. The average age of faculty is rising as fewer new appointments are made and as the retirement rate remains stable. Bess (1973) raises questions about the congruence of faculty and student life cycles and its consequences for teaching and learning. Lawrence's (1984) and Blackburn and Lawrence's (1985) reviews of the literature find little relationship between faculty age and student judgment of teaching. This is contrary to what Centra (1977) found with his larger data base.

Fewer studies exist on the relationship between student ratings and their learning. Williams' (1985) and Witkin's (1976) more detailed investigations of the act of college teaching (through examination of the kinds of responses instructors give to students' questions in class and to the nature of the questions students ask) reveals how little we know about how the act of teaching and how a method of teaching is related to different levels of student learning. William's literature review points out how infrequently faculty are concerned with such matters while they are teaching.

One suspects that congruence of the cognitive styles of both the instructor and the learner is also important. Baird (1973) and Mayne (1979) have examined teaching and learning with these notions in mind. The work of Perry (1968) on student development is also relevant here since how students will learn from different forms of instruction will depend on the stage they are in. There is then, much to be learned even about the act of teaching and how it affects student outcomes.

Probably the most generally acceptable criterion of validity of student evaluations of teaching effectiveness is a positive, statistically significant association between student achievement and a favorable student evaluation of the instructor's teaching effectiveness. Benton (1982) has reviewed a large share of the criterion-validity studies. The most prominent results may be framed around two general observations.

First, although the majority of the studies involved in his re-analysis reported a significant positive relationship between ratings and criterion measures of quality instruction, the correlation was almost always a modest one. Therefore, it could be argued that other factors important to effective teaching are not being evaluated with current instrumentation.

Second, Benton pointed out a discernible pattern in the frequency with which certain "items relating to an overall rating of the instructor or overall scores on the instrument were often listed as significant predictors of teaching effectiveness" (1982, p. 33). Cohen (1981) similarly reported an overall teaching item correlating highly with student achievement.

Whereas such information should facilitate administrative judgments about rewarding *generally* good teaching, college instructors require more specific information to make adjustments in their teaching attitudes and classroom behaviors. For this purpose, guidance from existing research is lacking. Evaluative data about classroom teaching are useful to the extent that they assist in improving instruction. It follows, therefore, that more research is necessary to make significant strides toward establishing procedures for conducting experimental studies of college teaching effectiveness.

Analytic studies designed to isolate effective features in college teaching vary widely in both methodology and the outcomes measured. Researchers have investigated, for example, the teaching effects of different class sizes, variations in teacher humor, student-centered versus instructor-centered discussions, and the like (Kulik & Kulik, 1979). However, manipulations of such characteristics of college instruction generally have failed to produce striking or even consistent results. Furthermore, the noncomparability in research design and method makes difficult the replication, extension, or even summarizing of the several investigations.

Conspicuously absent from current relevant empirical research (Feldman, 1983, being a notable exception) are studies investigating how personal attributes and general features of the environment, individually and collectively, function to influence perceptions and judgments associated with determining effectiveness of teaching. It would be naive to believe that college faculty evaluations are impervious to such psychological effects. The practical utility of future research depends on its ability to account for such influences.

Evidence addressing the credibility of evaluations of faculty teaching more often than not has been concerned with aspects of teaching. Direct evidence of *how* (or whether) different methods for teacher evaluation improve instruction is not so easily found. These, also, are issues warranting expression in future research.

Teaching Performance and Student Learning

The diversity and the complexity of empirical research studying relationships between teaching performance and student learning frequently defy controlled analysis. Consequently, the incorporation of meta-analytic research strategies is one of the most prominent developments in research about teaching effectiveness in postsecondary education.

Cohen (1981) conducted a meta-analysis on 55 independent validity studies relating student ratings to student achievement. He described quantitatively the common outcomes of the studies in his sample. Cohen reported overall outcomes indicating: (1) students rate most highly teachers from whom they learned the most; (2) some aspects of teaching (namely, skill and structure) are more related to student learning and achievement than are other aspects; and (3) "interpersonal" facets of teaching do not appear to be particularly important for student achievement.

In addition to determining the overall rating/achievement relationship, Cohen listed several methodological descriptors of design and analysis that suggest implications for interpreting related research studies. First, the time at which the ratings are administered seems to influence the weight of the rating-achievement correlation. As Cohen explained,

> In a few studies ratings were obtained from students after they learned about their final grades or examination scores. In these studies rating/achievement correlations were very high. For most of the studies in the sample, ratings were obtained from students before they received grade information. These studies reported smaller rating/achievement correlations. It seems likely, therefore, that students are influenced to a certain extent by knowledge of their grades. (p. 302)

Other findings from the meta-analysis showed that students' section-selection variables do not systematically bias the overall class-size effect, contrary to the assertion posited by Leventhal (1975). Consistent with Kulik and Kulik (1974), however, Cohen concluded that initial differences in students' abilities do not contribute to the magnitude of the relationship between student evaluation of teaching and student achievement. Finally, there is the

question of the differential impact of standardized ratings versus unstandardized ratings (Marsh & Overall, 1980). The overall conclusion from Cohen's work would not support the speculation that the size of the correlational effect is conditioned by the structural character of the rating instrument.

While Cohen and other investigators (Centra, 1977; Costin, 1978) provide strong support for the relationship between student achievement and teaching effectiveness as measured by student ratings, other reviews (Benton, 1982; Bruton & Crull, 1982) show how investigators have maintained, with equal assertion, that no relationship exists. Thus, there is a lack of unanimity on the magnitude of the relationship. As McKeachie and Kulik (1975) put it, "perhaps the most impressive *thing about* studies relating class achievement to class ratings of instructors is the inconsistency of the results" (p. 235).

Controversy also exists in the research literature over which components of the instructional process are most important in determining desired outcomes (namely, student achievement or learning). Grasha (1977) concluded that desired outcomes are due more to teaching methods than to the instructor's personal characteristics. Others (e.g., Bruton & Crull, 1982) reported results indicating variables of "affective" origins showed significant independent effects on student academic outcomes.

More recent research efforts, however, state that initial student demographics rather than classroom processes, particularly academic background data, are strongly linked to subsequent academic successes. Duncan & Barnes (1986) wrote:

> Such findings should be expected and should not be used to denigrate the value of teaching, or research on such presage variables as prior achievement are themselves likely to represent the cumulative effects of teaching over many years, especially by the time students enter higher education. (p. 763-764)

In addition, institutional concerns have begun to be addressed in the evaluation of teaching. A growing number of colleges and universities are introducing student course evaluations. Although some evaluations are compulsory, more often they are voluntary and, more frequently, they are performed on an irregular rather than on a regular basis. Perhaps half of the faculty in the U.S. have a course rated each year.

The timing of the evaluation suggests problems. The typical rating takes place at the end of the course and the instructor learns the results a month or two later. The evaluation may come too late to alter what went wrong during the course, and it comes when other concerns are more pressing. Furthermore, the faculty members rarely have adequate knowledge to interpret the ratings or the opportunity to obtain assistance to ameliorate a poor performance. In sum, then, intervention studies show that faculty teaching behavior can be changed, at least temporarily (Centra, 1973; Cohen, 1980; Erickson & Erickson, 1979; Pambookian, 1974; Parker & Lawson, 1978; Rotem & Glasman, 1979). While it is not known how lasting the effects are, improvement can be accomplished.

Before leaving this topic, the almost exclusive use of student judgments to evaluate teaching performance and its relationship to student learning is noteworthy. Faculty members seldom participate in this activity and, while in theory their contributions to improvement should be high, in practice the costs (both in time and psychologically) may exceed the benefits (Centra, 1975; Doyle, 1983). Many faculty members believe students, as apprentices, are not qualified to judge their performance. Faculty members evaluate teaching using different criteria than those used by students. The correlations between student and peer ratings of faculty teaching, however, are reasonably high (around .65) in the few studies of this kind that have been conducted (Blackburn & Clark, 1975).

The paradox of the necessity of peer review of scholarly work and its absence in the teaching role is an interesting one. When administrator ratings and self-ratings are compared with student ratings, the situation becomes disturbing, especially for self-assessments. The correlations of ratings between division heads and deans with students are about .4, but between the professor and each of the other three constituencies they fluctuate around .0.

(Doyle and Webber, 1978, and Marsh, Overall, and Kessler, 1979, found closer agreements between students' ratings and self-ratings.) When faculty judge their own teaching--and they do constantly--how they rate themselves has little relationship to how students, their peers, or administrators rate them (Blackburn & Clark, 1975; Centra, 1972). These issues and related topics are part of NCRIPTAL's research plans.

Rewards for Teaching

"Rewards" have a psychological as well as an environmental dimension. While faculty are said to respond chiefly to psychological rewards as a motivation for teaching, many claim that teaching would improve if it were recognized to the same extent as visible scholarship. While at first glance the issue of whether teaching is monetarily rewarded seems as if it could be simply settled with empirical evidence, underlying the debate are more complex psychological and environmental factors.

Briefly described, Tuckman (1976; Tuckman & Leahey, 1975) has shown significant correlations between faculty scholarly productivity and income received. He infers that faculty conduct research and publish to increase their income--the typical economist's explanation for everyone's work behavior. One can challenge Tuckman's conclusion by simply noting the fact that correlation is not the equivalent of causation. A deeper and more important cause may explain the correlation. That is, faculty publish simply because they like the investigative process and not for monetary returns.

Kasten (1984) and Siegfried and White (1973) learned that teaching is not financially rewarded to the extent that publishing is, yet faculty work to improve their teaching (Blackburn et al., 1980; O'Connell, 1983). As McKeachie (1980) has argued, the rewards of teaching are fundamentally intrinsic--satisfactions without dollars. Faculty work to improve their teaching simply because they enjoy the internal rewards of teaching well.

IV. Research on Faculty: A Summary of the Literature

With this broad perusal of sound published works related to American academics in their instructional role, what generalizations can we draw from the aggregate studies about the large and diverse membership of college and university faculties? First is confirmation of that very assertion. There is appreciable evidence of high differentiation between faculty cohorts across such dimensions as the employing institution, disciplinary affiliation, and age-related descriptors.

Literature indicating how other personal variables--gender and race, for example--may distinguish faculty subcategories is less prevalent, although research on women has increased. A related yet separate critical limitation of this line of research is an almost exclusive consideration of the research university. Importantly, our NCRIPTAL research addresses faculty in community and liberal arts colleges and in regional universities.

To what extent, and in what forms, are teaching practices related to faculty effectiveness in the classroom? To what extent is effectiveness in the instructional role associated with concrete behaviors? Indeed, to what extent is it even possible to gather credible evaluative information about teaching quality? Inquiries such as these have stimulated empirical research, literature surveys, and theses with limited supporting data. By and large, the range of writings fails to answer adequately any of these questions.

To illustrate, the quality and empirical sophistication of the research studies investigating the differential effectiveness of teaching methods and techniques conducted are generally weak and frequently put forward unfounded conclusions. On the other hand, our review has uncovered some information on how faculty teach, even if *why* they perform as they do continues to be a mystery.

Beyond broadly descriptive information on faculty in the conduct of their teaching responsibilities, there is little direct empirical support suggesting the extent to which, and in what forms, clearly defined individual-difference characteristics bolster (impede) effective classroom role enactment. This inattention to the relationships of certain faculty personality characteristics to differential teaching values and classroom behaviors comes despite the confirmation of the unique importance of such variables in literature beyond the province of conventional higher educational considerations.

In sum, guidance from the "state of the art" literature does not explain attitudinal and behavioral outcomes of faculty work life. Our reaction to this absence of important research direction involves the introduction of diverse lines of theoretical pursuits in the broader interdisciplinary domain of organizational work behavior and theory. Considered in more detail below, the several approaches selected for review in this report encompass theory as well as research.

V. Professionals at Work in Organizations

Here we expand and enlarge upon existing research tools for understanding more fully faculty behavior in colleges and universities. The search for insight into theoretical explanations for faculty satisfactions and motivations, in particular, may be enhanced by attention to theory and research arising from the literature on professionals at work in organizations available from psychology, the industrial sciences, sociology, political science, and anthropology. Our interest here is to encourage further development of the cross-fertilization of higher education research and this broader, more generic domain of literature. We view this literature as a potential source of supporting evidence about the professorial work experience.

Approaches with conceptual merit include: (1) role integration, (2) opportunity structure, (3) social support and cooperation, (4) organizational structure, (5) stress, (6) commitment, (7) work motivation, (8) power and authority, and (9) conceptualization of faculty roles. Further, in accord with findings in the literature, the various theoretical constructs can function as either a role performance enhancer or a role performance detractor. Emphasis was placed on the selection of role performance enhancers and detractors characterizing both properties of the environment and the person.

Each of the selected topics includes a synopsis of two or more research contributions that have guided the construct's development. Additionally, application of each construct research on a faculty sample (when available) is provided.

Role Performance Enhancers and Detractors: Properties of the Environment

Four different approaches to studying faculty behavior in colleges and universities have been included in the survey--role integration, opportunity structure, social support/ cooperation, and organizational structure. Each concept is described briefly below.

Role Integration

In a work that examined faculty members' motivation for teaching, Bess (1977) cites "ambiguity and conflicting role demands" as one of several sources of anxiety for professors. Indeed, *role* is an important concept and warrants examination. The majority of work examining role performance focuses on the conflict between the various roles individuals adopt within an organization. Inherent in this research is the assumption that strongly integrated roles lead to higher job satisfaction, less stress, and greater productivity. Due to the inherent fallacy of juxtaposing a lack of burn-out, for example, with job satisfaction, coupled with the limited work done on role integration using a faculty population, it would seem a more appropriate framework is role orientation--how individuals orient themselves to their colleagues and other constituencies.

Gouldner's work (1957, 1958) is the progenitor of research in this area. His model of a single "cosmopolitan-local continuum" of role orientation for college faculty was later developed into a two-dimensional model, one dimension referring to professional commitment and the other to organizational commitment. Blau and Scott (1962) are among several adopters of the two-dimensional model. Tuma and Grimes' (1981) more recent reconceptualization of Gouldner's early work incorporates five dimensions: professional commitment, external (referent group) commitment, commitment to organizational goals, organizational immobility or "loyalty," and concern with advancement.

Opportunity Structure

The concept of opportunity structure can be broken into three primary variables: (1) the desire of the individual in the organization to seek opportunities; (2) the socialization process of the individual within the profession and the organization; and (3) the actual structure of the organization itself.

In an oft-cited work, Kanter (1977) used primarily a psychological and descriptive orientation to examine how individuals adjust to their jobs when they perceive either high or low amounts of opportunity. Her definition of mobility opportunity focuses not only on job mobility but also on more individualistic opportunities such as self-growth and power. Further, she discusses the importance of self-fulfilling prophecy: "Those who seek opportunity, find it." While this personal dimension is important to performance enhancement in general, it is typically inadequate by itself to guarantee success. Other influences are thought to exert considerable pressure on the personal dimensions.

As for the socialization process, Schein (1971) examined the importance of being accepted as a newcomer. Others (Becker, 1964; Van Maanen, 1975) have identified factors that the newcomer must confront, such as establishing a personal identity. Some studies have examined the socialization of professional role commitment that takes place during graduate school before entering an organization (Weiss, 1981). In general, the findings suggest that individuals who have a personal desire for mobility may be socialized out of this desire by the group with which they work. The pressure brought upon a newcomer by herself or himself to "fit in" and not to seek opportunities for mobility may be stronger than the desire for mobility.

As for research about the organizational structure, due to the nature of most higher and postsecondary educational institutions, opportunity for mobility is limited. That is, a faculty member either moves into administration or does not move at all (unless the move is lateral or downward to a lower status institution) (Youn, 1981). More recently, however, Miner and Estler (1985) have posited that we should consider "responsibility accrual" as an alternative form of opportunity. Persons may become more influential (resulting in greater opportunity) without necessarily assuming a new position within the institutional structure. This is a relatively new way of viewing opportunity structure but one that merits closer scrutiny.

Social Support and Cooperation

Ever since Durkheim (1897; 1951) developed his theory of anomie based on the breakdown of social support leading to alienation, and at the extreme, suicide, the importance of social support has been recognized. Until the mid 1970s, however, little systematic research was done on the positive impact of social ties (Levinger, 1984).

Social support is a general concept composed of several more specific definitions (Depner, Wethington, & Ingersol-Dayton, 1984). Cobb (1979), Gottlieb (1978), Shumaker and Brownell (1984), and others present alternative conceptual perspectives. House and Kahn (1985) have proposed three major categories into which social support assessment may be grouped: existence (i.e., designation of the absence or presence of an interpersonal relationship); supportive content (i.e., the type of support given); and network structure (i.e., features of the full set of relationships in which a focal individual is involved).

Gouldner (1960) initiated activity in this area by positing that a norm of reciprocity exists in this culture. While others (Greenberg, 1980; Shumaker & Jackson, 1979) have argued that a reciprocity "burden" may place stress on a relationship, research has generally supported and extended the notion (Tjosvold, 1984) that a supportive, cooperative atmosphere is a less stressful and more productive atmosphere in which to work (Deutsch, 1949a, 1949b). The issue of social support is an important one in light of Bess' (1977) assessment that college faculty experience a substantial amount of isolation.

Organizational Structure

The issue of bureaucracies and bureaucratic structures has been the basis for debate on such issues as job performance and satisfaction since Weber's (1947) classic work on the subject. Yet, for all the discussion on bureaucracies, there have been few empirical studies and the results have been far from conclusive.

Meltzer and Salter (1962) found little consistency between formal organizational factors and

employees' perceived job satisfaction. Porter and Lawler (1964) found no consistent relationship between types of organizational structure and job perception of managers.

In education, on the other hand, Carpenter (1971) found that public school teachers reported less satisfaction with their jobs as the "height" of the bureaucratic triangle grew. Similarly, in a study of instructors' leadership behavior in the classroom in ten community colleges, a moderating effect was identified for faculty who had a participative leadership style in the classroom. Instructors with a highly participative leadership style were affected more by both formal and perceived organizational participativeness than were the teachers low in participative leadership style in the classroom.

While this may appear to lead to the conclusion that shorter, wider bureaucracies are preferred in academic settings, Herzberg, Mauser, and Snyderman's (1959) work on two-factor motivation may prove tempering. These results indicate that organizational policy and administration is actually a hygiene factor as opposed to a motivating factor and may place organizational structure into the arena of job dissatisfaction instead of job satisfaction. In any event, it is clear that organizational structure suggests importance for understanding faculty performance. More research is needed on the topic.

Role Performance Enhancers and Detractors: Properties of the Individual

In the following list of selected role performance enhancers and detractors, emphasis centers on theoretical constructs that describe individualistic aspects of faculty behavior. The five examples include--stress, commitment, work motivation, power and authority, and conceptualization of faculty members' roles.

Stress

Although the effects of stress on college faculty have received some attention in the literature (e.g., Baldwin, 1979; Finkelstein, 1984a), relatively little appears to be known about the specific syndrome called burnout. From the extensive literature on burnout in service professions, such as counseling, nursing, social work, and precollege teaching (Edelwich & Brodsky, 1980; Grossnickle, 1980; Maslach, 1982), some sense of its probable impact on college teachers can be gained.

Initially we decided to extend the focus of this section to the topic of stress in general. The rationale was based on the belief that stress and burnout referred to essentially the same construct, and that the latter might have a "pop psychology" connotation, hence, less credibility among researchers and theorists for scholarly investigation. Both assumptions were erroneous. First, several authors (e.g., Farber, 1983; Freudenberger, 1983) note that stress and burnout have different etiologies and implications for an individual's adjustment and should *not* be equated. Second, the interest in burnout actually seems to have grown in recent years as judged by the scholarly literature. This section focuses on the causes, symptoms, and treatment of burnout.

Definitions

Burnout is considered to result not from stress per se, but from *unmediated* stress (i.e., from feeling pressured and anxious about having no way "out," with no buffers or support system) (Farber, 1982; 1983). While stress can have both positive and negative effects, burnout is always a negative experience, though it may prompt individuals to make changes in their life style that may ultimately prove beneficial.

Freudenberger (1983) and Maslach (1982) attribute the "buzz-word" connotation of burnout to overusage and overextension and to its frequent conceptualization within a medical model as opposed to a psychosocial context. Even among serious writers, burnout has been defined in a variety of ways following the introduction of the term by Freudenberger (1974). For example, Maslach (1976) defines it as "loss of concern for the people with whom one is working" in response to job-related stress. Cherniss (1980) emphasizes its effects in reducing motivation, resulting in a psychological withdrawal from work. Karger (1981)

TABLE 2

Signs and Symptoms of Job Stress and Worker Burnout in Human Service Programs

1. High resistance to going to work every day.
2. A sense of failure.
3. Anger and resentment.
4. Guilt and blame.
5. Discouragement and indifference.
6. Negativism.
7. Isolation and withdrawal.
8. Feeling tired and exhausted all day.
9. Frequent clock-watching.
10. Great fatigue after work.
11. Loss of positive feelings toward clients.
12. Postponing client contacts: resisting client phone calls and office visits.
13. Stereotyping clients.
14. Inability to concentrate on or listen to what client is saying.
15. Feeling immobilized.
16. Cynicism regarding clients; a blaming attitude.
17. Increasingly "going by the book."
18. Sleep disorders.
19. Avoiding discussion of work with colleagues.
20. Self-preoccupation.
21. More approving of behavior-control measures such as tranquilizers.
22. Frequent colds and flus.
23. Frequent headaches and gastrointestinal disturbances.
24. Rigidity in thinking and resistance to change.
25. Suspicion and paranoia.
26. Excessive use of drugs.
27. Marital and family conflict.
28. High absenteeism.

Drawn from Berkeley Planning Associates (1977), Freudenberger (1974), and Schwartz and Will (1961).
Source: Cherniss (1980).

views burnout as essentially the same phenomenon as alienation. Tables 2 and 3, taken from Cherniss (1980) and Carroll and White (1980), respectively, list specific signs and symptoms commonly associated with burnout.

As with many other behavioral and affective syndromes described in the psychological literature (neurosis, anxiety, etc.), difficulties in achieving a standard or consensual definition for burnout have occurred and will most likely continue. According to Maslach (1982), the threads of a working definition are provided, however, by the following points of general agreement:

1. Burnout is an individual state (i.e., organizations do not burn out).

2. Burnout is an internal psychological experience involving feelings, attitudes, motives, and expectations.

3. Burnout is a negative experience that concerns problems, distress, discomfort, dysfunction, or negative consequences.

4. Burnout is an exhausting experience characterized by loss of energy, depletion, and fatigue, with both mental and physical manifestations.

5. Burnout causes depersonalization--irritability with and alienation from others.

6. Burnout causes depression.

Theoretical Models

One popular conception of burnout is the *social competence* model described by Harrison (1983) and based on the competence-motivation theory of White (1959). Adapted from Harrison (1983), a graphic illustration of this model is provided in Figure 1.

TABLE 3

Personal Indicators of Staff Burnout

HEALTH INDICATORS	EXCESSIVE BEHAVIOR INDICATORS	EMOTIONAL ADJUSTMENT INDICATORS	RELATIONSHIP INDICATORS	ATTITUDE INDICATORS
Fatigue and chronic exhaustion	Increased consumption of caffeine, tobacco, alcohol, over-the counter medications, psychoactive prescription drugs, illicit drugs	Emotional distancing	Isolation from or overbonding with other staff	Grandiosity
Frequent and prolonged colds		Paranoia		Boredom
Headaches		Depression: loss of meaning, loss of hope	Responding to clients in mechanical manner	Cynicism
Sleep disturbances: insomnia, nightmares, excessive sleeping		Decreased emotional control	Increased isolation from clients	Sick humor—aimed particularly at clients
Ulcers	High-risk-taking behavior: auto/cycle accidents, falls, "high-risk" hobbies, general proneness to accidents and injuries, gambling, extreme mood and behavioral changes	Martyrdom	Increased expressions of anger and/or mistrust	Distrust of management, supervisors, peers
Gastrointestinal disorders		Fear of "going crazy"		Air of righteousness
Sudden losses or gains in weight		Increased amount of time daydreaming/ fantasizing	Increased interpersonal conflicts with other staff	Hypercritical attitude toward institution and/or peers
Flare-ups of preexisting medical disorders: diabetes, high blood pressure, asthma, etc.	Increased propensity for violent and aggressive behavior	Constant feelings of being "trapped"	Increased problems in marital and other interpersonal relationships away from work including relationships with one's children	Expressions of hopelessness, powerlessness, meaninglessness
Injuries from high-risk behavior	Over- and undereating	Nervous ticks		
Muscular pain, particularly in lower back and neck	Hyperactivity	Inability to concentrate		**VALUE INDICATORS**
Increased premenstrual tension		Intellectualization	Social isolation: overinvolvement with clients, using clients to meet personal and social needs	Sudden and often dramatic changes in values and beliefs
Missed menstrual cycles		Increased anger		
		Increased tension		

Source: Carroll and White (1980).

The central core of the model is the beginning worker's motivation to "help others" and the idealism that he or she brings to the job environment (Freudenberger, 1975). It is through "effective" interactions with clients that the worker acquires a sense of competence. Barriers in the environment, which may be inevitable for certain service workers, can impede effectiveness, however, and thereby inhibit them from acquiring a sense of competence. Burnout begins to develop as a worker's ability to surmount the barriers weakens.

A second model is the *transactional framework* which posits a three-stage process (Cherniss, 1980). The first stage involves an imbalance between resources and demand (i.e., stress). The second stage is the immediate, short-term emotional response characterized by feelings of anxiety, tension, fatigue, and exhaustion. The third stage consists of changes in attitudes and behavior, such as detachment in treating clients. Importantly, this last stage represents a psychological escape to ensure that further job-related stress will not be added to existing stress. This transactional model is similar to Edelwich and Brodsky's (1980) four-stage model noted earlier.

A recently proposed model by Meier (1983) draws in part on the literature on self-efficacy (Bandura & Adams, 1977) and learned helplessness (Seligman, 1975). Four elements are proposed: (a) low expectations for positive reinforcement and high expectations for punishment in the work environment, (b) low expectations for using controlling reinforcers, (c) low expectations for personal competence on performing the behaviors necessary to

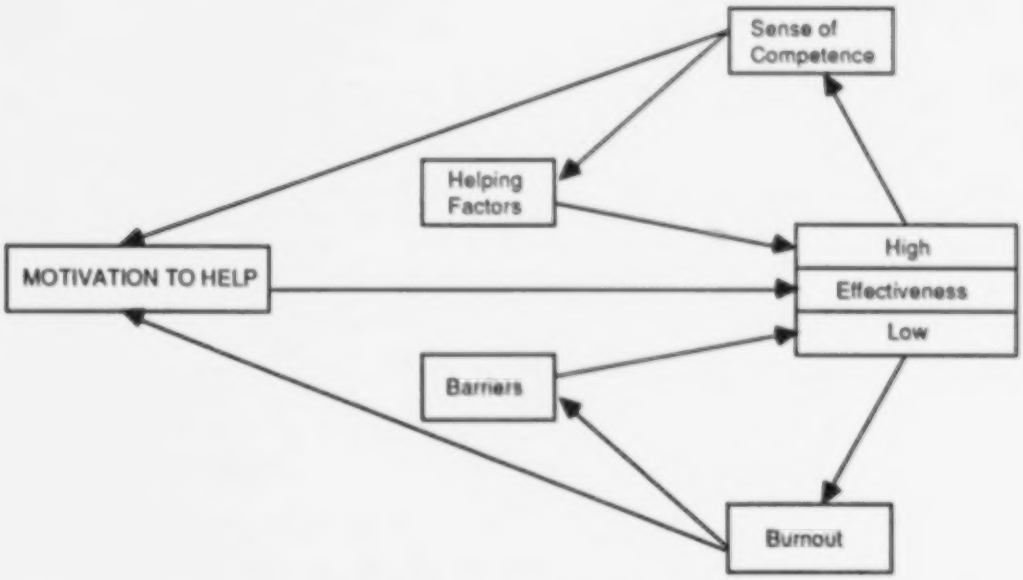

Figure 1. A social competence model of burnout. Adapted from "Burnout: The case of the helpless helper," by W. David Harrison. In Social Service Practice Relationships, by T. Keefe and D. Maypole. Copyright ©1983 by Wadsworth, Inc. Reprinted by permission of Brooks/Cole Publishing Company, Monterey, California.

control the reinforcement, and (d) contextual processing that determines how those expectations are learned and changed. (Those unable to cognitively restructure thus become the burnout victims.) This model complements earlier ones (e.g., Maslach, 1982; Freudenberger, 1975) by placing more emphasis on both the individual and the environment as well as on cognitive as opposed to affective consequences of burnout experiences.

This model has extended research conducted by Seligman (1975). Seligman saw helplessness as a situation in which outcomes occur independent of all voluntary responses by the individual. In his original research, Seligman "conditioned" dogs to passively receive shock even though escape could be easily accomplished. The dogs had learned to be helpless. According to Meier (1983), burnout produces similar feelings in humans. The perception becomes that no matter what one does, failure and frustration are inevitable.

Why do those in helping professions seem to be susceptible to burnout? Possible reasons proposed by Edelwich and Brodsky (1980) are: (a) idealistic goals of helpers, (b) lack of measurement criteria for success, (c) low extrinsic compensation, (d) limited upward mobility, (e) sexism, (f) inadequate institutional support, and (g) the expectation to devote equal time to all clients, regardless of need. Edelwich and Brodsky also suggest that burnout tends to evolve over several "developmental" stages; these stages include enthusiasm, stagnation, frustration, and apathy. Finally, they suggest several interventions for coping with burnout, among which are rotating responsibilities, acquiring new training, and taking leave.

Synoptic Review of Selected Literature on Teacher Burnout

Bardo (1979) discusses the problem of teacher burnout in public schools. Symptoms include high absenteeism, lack of commitment, abnormal desire for vacations, low self-esteem, and inability to take school seriously. Bardo attributes much of the problem to the teacher's pervasive sense of having lost control of the classroom.

Emener, Luck, and Gohs (1982) explore the theoretical causes of burnout using the ELBOS instrument. The instrument is based on seven theoretical constructs: feedback, work

environment, autonomy, expectations, affect/attitude, self-perception, and job mobility. Their study indicates that "work-related" feelings (satisfying/unsatisfying) are the strongest predictors of burnout.

Grossnickle (1980) discussed the rise in teacher burnout cases during the 1970s. He views the problems as mostly environmental, involving increased physical assaults, low pay, and the back-to-basics movement.

Gruneberg, Startup, and Tapsfield (1974) focus on the relationship between environmental factors and job satisfaction for university teachers. Their findings indicate that attractiveness of the local environment (town and geography) contributes more to overall job satisfaction than do perceived academic isolation, library facilities, and isolation from colleagues elsewhere.

Lenhart (1980) examines burnout effects among college nursing faculty. The reasons found include economic restrictions, tenure worries, heterogeneity of students (particularly low performers), and feeling unable to change the system.

Lubin (1982) describes weekly seminars conducted at the Illinois School of Psychology to combat burnout among college faculty. Positive effects along with support from the administration are reported.

Watkins (1982) discusses burnout as the "new academic disease" affecting both college faculty and university administrators. These individuals are said to suffer from professional stagnation, lack of challenge, overly high achievement needs, failure to find significance in their work, absence of control, and the teaching of subjects they do not want to teach.

Summarizing Notes

Some final interpretations and conclusions from the literature on burnout are:

1. Burnout *is* a legitimate psychological construct that merits serious scholarly investigation.

2. Much work in burnout has been done with social services workers and precollege teachers. Little research has been done with college faculty.

3. Theoretical models of burnout provide more meaningful and directed frameworks for interpreting career frustrations and pressures for college faculty than do generic psychological constructs such as stress, anxiety, anomie, and alienation, since they deal specifically with modern, work-related stresses for human service professionals.

4. Whatever one wants to call burnout, the processes it entails seem applicable to what certain college faculty experience from the effects of continual stress, frustration, or apathy.

Commitment

Literature about commitment as a psychological construct is fairly recent. In general, commitment is viewed in terms of loyalty, identification, and involvement with the work system. It is believed to disclose reliable linkages between work attitudes and organizationally relevant behaviors such as continued performance and productivity. For these reasons, probing the meaning of commitment has had research appeal among organizational work behaviorists.

This section examines major competing commitment theories and corresponding research findings so that their potential application to faculty work can be considered. Also included is a review of recent research studying commitment in relation to college faculty.

Theory Development

For the most part, commitment theorists have chosen one of two major approaches to guide construct conceptualization. One approach is to consider commitment in terms of an *attitude* of attachment to the workplace that causes specific behavioral outcomes. Several researchers have adopted some variation of this concept of commitment (e.g., Angle & Perry, 1981; Mowday, Porter, & Steers, 1982; Weiner & Vardi, 1980). Emanating from a more social-psychological perspective, the second theoretical approach for viewing commitment has as its identifying feature an emphasis on the effects of particular *behaviors* on ensuing attitudes (Salancik, 1977; Staw, 1977).

A seemingly more pragmatic and useful theoretical orientation than either of the two more popularly used approaches conceives commitment as the interdependence of attitudes and behaviors. That is, commitment is viewed to involve the mutual influence of both attitudes and behaviors. Importantly, this last conceptual framework was used with some success in recent commitment research on college faculty (Polk, 1986).

Correlates of Commitment

Extensive and detailed reviews by Salancik (1977) and Mowday et al. (1982) have described relevant empirical studies identifying correlates of commitment. Two broadly defined categories of variables emerge from recent commitment investigations conducted primarily in industrial organizations. They are (a) personal characteristics and (b) higher order needs and values.

Studies have linked several personal characteristics to commitment, including age and length of employment (Angle & Perry, 1981; Austin, 1984; Polk, 1986; Steers, 1977), position level (Angle & Perry, 1981; Polk, 1986; Stevens, Beyer, & Trice, 1978), and gender (Angle & Perry, 1981). Other evidence has demonstrated that higher-order needs and value orientation relate to commitment (e.g., Hall, Schneider, & Nygren, 1970; Steers, 1977). To illustrate, Steers' (1977) study of research scientists in a major research laboratory found the need for achievement to be significantly associated with commitment. Hall et al. (1970) indicated needs for autonomy and self-fulfillment correlated with commitment.

Taken together, this stream of findings supports the contention by Hall et al. that "some 'right type' of person would be most likely to identify strongly with a particular job situation; the specific component characteristic. . .would depend upon the particular goals and climate of the employing organization" (1970, p. 187). In this sense, then, commitment would appear to be connected to the sociological notion of 'person-environment fit.'

The second cluster of commitment correlates encompasses factors characterizing the *nature* of the job and work environment. Various findings suggest a positive relationship between commitment and certain core job facets such as freedom, challenge, variety, feedback, and work significance or self-perceived meaningfulness of work (Buchanan 1974; Hall et al., 1970; Marsh & Mannari, 1977; Steers, 1977). Interpreting these and similar findings, Salancik (1977) posited that commitment relates importantly to the "felt responsibility" of the employee. Conversely, commitment has been indicated to relate inversely with the lack of role clarity, bureaucratization, role overload, routinization, and excessive stress (e.g., Mowday et al., 1982; Stevens et al., 1978).

Research on Commitment of College Members

Polk (1986) examined manifestations of the commitment construct for faculty members in higher education. Specifically, the study identified and analyzed relationships between commitment (conceived operationally as the propensity to remain in the academic profession) and selected professional variables representative of dimensions of faculty work.

The findings support the speculation that a conceptualization of commitment is relevant for and applicable to college teachers. The evidence showed a division within the sample based on the intensity of commitment to the profession. Furthermore, variations across several

attitudinal and behavioral dimensions of academic work were found to relate strongly to the construct.

Work Motivation

The sophistication and potential value of research in the area of work motivation continues to increase. The psychological literature, in particular, illuminates the issue of faculty motivation.

A sound theoretical framework suggested by Campbell and colleagues (1970), and subsequently adopted by Landy and Trumbo (1980), differentiates between process theories and content theories. Process theories (namely, instrumentality theory and expectancy theory) concentrate on the psychological processes that determine *how* an individual chooses his or her level of effort toward a particular task. Content theories, by comparison, have at their core a concern with the individual's specific needs that initiate, arouse, and stop behavior. The work of Maslow (1954), Alderfer's ERG model (1972), and Herzberg et al.'s dual-factor model (1959), each employing a need-oriented approach, illustrate theories classified as the content theories of work motivation.

Theoretical Approaches and Corresponding Research

Recent motivation literature indicates that need theory suffers from both methodological and theoretical shortcomings. Many of the problems are enumerated in Salancik and Pfeffer's (1977) critique of need-based motivational theories. In particular, it is posited that such a paradigm fails to consider sufficiently the social context in which work happens and how this context influences attitudes and behaviors. Also, reliable scales emphasizing the predetermined hierarchical arrangement of individual needs have been difficult to construct, and models of human needs have failed several empirical tests. (See Staw, 1984, for a recent survey of related theoretical contributions.)

While expectancy formulations clearly have assumed a dominant role among the most current motivation models, need theory has continued to play a definite *indirect* role in construct development. Recent theorists belonging to the need-hierarchy group have begun to concentrate their research on one personality variable, the need for achievement (e.g., Atkinson & Birch, 1970; McClelland, 1971). Empirical evidence has been presented to suggest that high need for achievement strengthens the relationship between performance and satisfaction for professional employees (Steers & Spencer, 1977).

For their part, expectancy theorists are increasingly acknowledging how human needs can affect cognition about future events with notions like valued outcomes, since it is frequently thought that outcomes acquire value because of a need shortage (Lawler, 1973). Expectancy theory is particularly useful in separating the contingencies that affect effort-performance and performance-reward. Selected empirical findings indicate that people with high self-esteem and personal efficacy perceive stronger relationships between what they do and the results of their actions than do people who see these outcomes occurring as a function of fate or luck (Oldham, 1976).

Kopelman (1976) concluded that people's expectations are related to the 'reward responsiveness' of the work organization. Studies by Parker and Dyer (1976) and Kopelman and Thompson (1976) support the expectancy-based motivation theory that the expected-value/behavior relationship may be moderated by task characteristics or external pressures.

A growing group of dissenters to the highly popular expectancy theoretical orientation to motivation is composed of attribution theorists. Proponents of attribution theory generally reject the notion that intrinsic and extrinsic outcomes can be additive in their effect on motivation, and hence criticize the research methodology of expectancy theorists.

When the literature on expectancy, need, or attribution theory is reviewed, surprisingly little is oriented to those engaged in work at colleges and universities. Only very recent research

literature would indicate any movement in that direction. One noteworthy example, Staw (1984) extends motivational theory and principles to the analysis of educational settings.

On balance, motivation as a theoretical construct has merit for guiding research on faculty members.

Power and Authority

The literature on power and authority incorporates disciplines as diverse as political science, anthropology, sociology, and social psychology. In the last few years there also has been growing interest in the topic among those studying organizational behavior. The various theorists agree on the importance of power and authority in understanding social interaction.

Toward Definition

In general, a distinction is drawn between "power" and "authority." Many writers (e.g., Henderson, 1981; Minton, 1972) consider power as the *ability* to affect the outcomes experienced by others. Authority, on the other hand, denotes the group's *recognition* and *acknowledgement* (that is, legitimacy) of the pattern of power operating within the setting (Pfeffer, 1981). Weber (1947), in his classic volume, alluded to the importance of the legitimation of power in social interaction.

Basic Theoretical Perspectives

Cartwright (1959) proposed the *field* theoretical conceptualization of power, which evolved out of Lewinian field theory (Lewin, 1951). Like Lewin, Cartwright focuses on the concept of force, the magnitude and direction of which are determined by seven attributes of the social exchange: the agent, act of the agent, the agent's position, the possibility of movement, personal predisposition (viz., need, motive),
strength of constructs, and duration of event. This framework is the precursor to more recent social psychological models for the study of power (Henderson, 1981).

Primary to all *exchange* theories of power is that individuals try to maximize rewards and minimize costs in an effort to achieve the most profitable outcomes (e.g., Blau, 1964; Galaskiewicz, 1979; Thibaut & Kelley, 1959). Hence, according to the exchange theory orientation, power rests on the quantity and range of control one person exerts over the positive and negative consequences experienced by another. The nature of the relationship can be illustrated in terms of "resources" desired by one party yet available to a second party thereby generating "dependency." Blau's (1974) analysis of the 1972 Carnegie Commission survey of faculty shows faculty acquiring and retaining power and control over curricular matters and the selection of their colleagues.

A third general theoretical approach often used to describe and explain power involves *learned role behaviors*. Role theories posit the overall role structure of a group delineates the individual's power relative to other individuals (Swenson, 1973). Inter-role and intra-role problems emanating from incongruent role demands and expectations are believed to be associated with the exercise of power. According to role theories, certain roles empower the people occupying them with the chance to control sanctions and information. The role conception has been used to investigate the interaction between people in such different contexts as families (e.g., parent-child), business (e.g., employer-employee), and social institutions (e.g., teacher-student).

Conceptualization of Faculty Members' Roles

The definition of "faculty role" is at once a conceptual and a practical issue. While reflecting on our interviews with faculty members at various institutions it became evident that there are some individuals for whom teaching is the essence of their faculty role. For others, however, the subject matter provides the meaning; they would not necessarily be faculty members except for the opportunity it provides to remain involved with a particular discipline. Among the former group, teaching is their faculty role but among the latter

group, teaching is one aspect or task subsumed within the faculty role. Theoretically, these role identities are quite different and probably influence their everyday behavior in important ways.

How does one study such an abstract phenomenon? Some researchers have approached the problem using theories of differentiation (Blau, 1974) and scientific specialization (Parsons & Platt, 1968). But these perspectives assume that maintaining the institution supersedes attempts on the part of an individual to rationalize her or his faculty role when it deviates from the institutionally sanctioned prototype. Few if any researchers have used existential approaches in which individual interpretations of their work experiences are used to build rather than test theory (Rice, 1979, may be an exception). In this latter case, the assumption is that individuals may devise quite different ways of perceiving their world and that these ways allow them to maintain their motivation to teach.

The work of Sternberg (1981) on implicit and explicit theories of intelligence offers an interesting paradigm to follow. Essentially, he assumes that researchers and laypersons carry in their heads prototypes of intelligence (implicit theories) and these may or may not be the same as the definitions of intelligence that emerge from psychometric research (explicit theories). He then proceeds to define and compare these different prototypes and discuss the implications of their overlap and their distinctiveness.

Another conceptual framework is based on the adult socialization literature. One could take as a jumping off point the interview comments about part-time faculty members. Implicit to the interviews with the community college faculty members is an assumption that the part-timers somehow just don't measure up; that having too many of them somehow endangers the quality of education. What is the message these faculty get when they are brought in to teach a class (one aspect of the faculty role) and are not given access to all the institution's resources? There is the individual interpretation, of course, but the literature suggests there will be some lasting differences between these professors, whose socialization is disjunctive, and their full-time counterparts, whose socialization was serial.

VI. Concluding Observations

In this document we endeavored to synthesize the research literature on the work life of faculty in American colleges and universities. While our review is not comprehensive, we believe it provides an accurate description and assessment of the nearly fifty years of social science inquiry treating faculty as the focus of concern. Over the years, the extensive and progressively sophisticated scholarly investigations have produced considerable information about the academic profession. The current review has highlighted the basic findings underscoring the evidence, and in some instances even strong speculation, that bear on faculty as college instructors. Since our various results have been discussed throughout the review, they are not repeated here.

Moreover, our review has identified questions that remain unanswered in the research literature. We have suggested that awareness of the answers may be profitable for inducing desired changes in teaching behavior and performance. It is noteworthy that conspicuously missing from literature on teaching in higher education are paradigms underlying research on the *determinants* of faculty perceptions and actions. Inattention to this area of questions persists. Similarly, the effects of differential faculty values, beliefs, and attitudes about their instructional role need to be explored in the context of faculty development issues.

In advancing knowledge there is no better substitute than clearly articulated direction. In this vein, selection of research reviewed in this volume has uncovered highly promising concepts and constructs derived from noneducational domains suggesting practical adaptation to research problems confronting higher education today. Application of this body of literature already is playing an important role in ongoing NCRIPTAL research efforts. Finally, it is to be expected that the next decade of research on faculty as college teachers will see increasing consideration of the utility of concurrent research outside of higher education.

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[NOTE: In some instances references may have been made to early drafts of works subsequently published in altered form.]

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